REMARKS

Claims 2-9, 11-15, 17-26 and 28-34 remain pending in the application. Reconsideration is respectfully requested in light of the following remarks.

Provisional Double Patenting Rejection:

The Examiner provisionally rejected claims 1-31 under the judicially-created doctrine of obviousness-type double patenting as being unpatentable over claims 1-36 of copending Application No. 10/027,353 (hereinafter, the "copending application"). Applicant notes that claims 1, 10, 16 and 27 were previously canceled, and new independent claims 32-24 were previously added. Applicant further notes that the Office Action does not state a provisional double patenting rejection of added claims 32-34. Applicant also notes that the Examiner's analysis of the old independent claims in the provisional patenting rejection does not take into account the changes that have been made in added claims 32-34 which the Examiner characterized in the Advisory Action as raising "new issues." Therefore, Applicant submits that the provisional obviousness-type double patenting rejection is improper.

Section 102(b) Rejection:

The Examiner rejected claims 4-6, 9, 11-15, 17, 20, 23-26 and 28-34 under 35 U.S.C. § 102(b) as being anticipated by Crater et al. (U.S. Patent 5,146,588) (hereinafter "Crater"). Applicant traverses this rejection and submits that these claims are not anticipated by Crater, as set forth in greater detail below.

Crater fails to teach or suggest all of the limitation of Applicant's claim 32. Specifically, Crater fails to teach or suggest an array controller configured to perform block operations on data stored to a storage array, where the array controller includes a cache accumulator memory configured as a cache of a memory and a functional unit configured to perform a block operation on one or more block operands to generate a

block result. In rejecting claim 32, the Examiner asserts that the redundancy accumulator 301 of Crater corresponds to Applicant's claimed cache accumulator memory, and that Crater's inclusion of redundancy accumulator 301 within a unit denoted as "cache 113" within is a disclosure of Applicant's recitation that the cache accumulator memory is a cache of a memory. However, the Examiner's assertion is not supported by the structure disclosed by Crater. Although Crater discloses cache 113, <u>Crater does not describe in any way that redundancy accumulator 301 is itself configured as a cache of any memory.</u> Crater describes the function of redundancy accumulator 301 as simply to temporarily "...store the intermediate result of... redundancy calculations until all of the physical tracks have been included in the redundancy calculation." (col. 7, lines 55-57). Crater does not disclose <u>any</u> relationship between the contents of redundancy accumulator 301 and other data storage elements within cache 113, much less a caching relationship as recited in Applicant's claim.

The Examiner seems to imply that because Crater's redundancy accumulator 301 is included within a cache, redundancy accumulator 301 must itself function as a cache. This simply does not follow. Crater discloses that cache 113 functions as a cache with respect to data transfers between host processors 11, 12 and disk drive subsets 103 (FIG. 1 and col. 6, lines 7-12, 38-39). This operation occurs at an entirely different level of scope than the relationship between cache 113 and its component, redundancy accumulator 301. That is, the fact that cache 113 functions as a cache with respect to host processors 11, 12 and disk drive subsets 113 does not entail that redundancy accumulator 301 functions as a cache with respect to cache 113, and in fact Crater discloses no such relationship.

Applicant notes that anticipation requires the presence in a single prior art reference disclosure of <u>each and every element</u> of the claimed invention, <u>arranged as in the claim</u>. M.P.E.P 2131; *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 221 USPQ 481, 485 (Fed. Cir. 1984). The <u>identical</u> invention must be shown <u>in as complete detail</u> as is contained in the claims. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). For at least the reasons given above, Crater

clearly fails to meet this standard with respect to claim 32. A similar argument applies to independent claims 28 and 33-34, which recite limitations similar to those of claim 32. Applicant therefore submits that each of these claims is not anticipated by Crater.

Crater further fails to teach or suggest all of the limitations recited in Applicant's claim 5. Specifically, Crater does not teach or suggest that the cache accumulator memory is configured to load a copy of the block operand into the cache accumulator memory from the memory in response to the block operand not being present in the cache accumulator memory when the instruction is received. In rejecting claim 5, the Examiner asserts that in Crater, the first block operand is loaded into redundancy accumulator 301 from the DATA INPUT BUS via latch 303. However, Crater does not disclose that redundancy accumulator 301 obtains its input data from a memory, nor doing so in response to the block operand not being present in the accumulator. Rather, Crater discloses that "[i]n operation, a byte from a received physical track is read into latch 303..." (col. 8, lines 56-57). Further, Crater shows in FIG. 2 and FIG. 3 that this data bus corresponds to the DEV ADT bus, which interfaces data directly from disk drive subset 103. Thus, Crater's redundancy accumulator 301 does not operate to load data from a memory of which it is configured as a cache in response to that data not being present, as recited in claim 5. Therefore, Crater further fails to anticipate claim 5.

Numerous other ones of the dependent claims recite additional distinctions over the cited references. However, as the independent claims have been shown to be distinguishable, further discussion of the dependent claims is unnecessary at this time.

Section 103(a) Rejection:

The Examiner rejected claims 2 and 18 under 35 U.S.C. § 103(a) as being unpatentable over Crater in view of McClure (U.S. Patent 5,590,307) (hereinafter "McClure"), claims 3 and 19 as being unpatentable over Crater in view of Faraboschi et al. (U.S. Patent 6,122,708) (hereinafter "Faraboschi"), and claims 7, 8, 21 and 22 as being unpatentable over Crater in view of Handy ("The Cache Memory Book: The

Authoritative Reference on Cache Design," Academic Press, 1993, page 57) (hereinafter "Handy"). Applicant traverses these rejections and submits that these claims are distinguishable for at least the reasons given above with respect to the corresponding independent claims.

Moreover, numerous other ones of the dependent claims recite additional distinctions over the cited references. However, as the independent claims have been shown to be distinguishable, further discussion of the dependent claims is unnecessary at this time.

CONCLUSION

Applicant submits that the application is in condition for allowance, and prompt notice to that effect is respectfully requested.

If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert, & Goetzel, P.C. Deposit Account No. 501505/5681-05200/RCK.

Also enclosed herewith are the following items:

☒ Return Receipt Postcard

☐ Petition for Extension of Time

☐ Notice of Change of Address

☐ Other:

Respectfully submitted,

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